Strategic Plan

State Emergency Telephone Number Program
California Department of General Services
Telecommunications Division

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Table of Contents

Introduction

Dialing 9-1-1 is the most familiar and effective way for the public to obtain help in an emergency. Currently, a community of state and local government agencies that are dedicated to saving lives and protecting property provide 9-1-1 services throughout California. Rapid advances in technology, increasing population and explosive growth in wireless communications challenge the ability of this community to deliver the highest quality 9-1-1 service possible.

Today, California 9-1-1 Emergency Telephone Services are at a crossroads. The environment of the twenty-first century, including changes in technology, competition, federal requirements and increased wireless communications usage, present momentous challenges and unprecedented opportunities. Meeting the challenges and capitalizing on the opportunities will require comprehensive, cohesive strategic planning that considers emerging technologies, mandates, funding mechanisms, diverse demographics, topography and jurisdictions, and the continuing impact of deregulation of the telecommunications industry. This strategic plan represents a first step towards continued excellent 9-1-1 services today and into the next century.

This strategic plan is a living document. To maintain its currency and relevance in an environment where change in technology, demographics and public needs and expectations are the norm, the 9-1-1 Program Office in consultation with 9-1-1 stakeholders, including state and local government agencies, will formally review and update this strategic plan periodically.

Where Are We Now

History and Background

The State Emergency Telephone Number Program, hereafter called the 9-1-1 Program, has been in effect since 1979. Under the authority of Government Code Section 53100-53120, which is known as the Warren-9-1-1 Emergency Assistance Act, the State of California, Department of General Services, Telecommunications Division (DGS-TD) has oversight authority for the 9-1-1 Program. The 9-1-1 Program currently serves approximately 500 Public Safety Answering Points (PSAPs) in law enforcement, fire and emergency medical services agencies within California's 58 counties.

Public safety agencies are funded and reimbursed for costs approved by the 9-1-1 Program Office from the Emergency Telephone Number Account. The Revenue and Taxation code, Sections 41001-41019 provide for a emergency telephone users surcharge, which is collected by the State Board of Equalization for intrastate emergency telephone communications services and deposited into the Emergency Telephone Number Account. Current law allows the surcharge rate to be no greater than .75 of 1 percent, nor less than .50 of 1 percent of each telephone subscriber's intrastate telephone communication services. Currently the surcharge rate is .72 of 1 percent.

In the past, California has been well served by its centralized 9-1-1 Program and the 9-1-1 Program Office, which strives for adherence to prudent fiscal management policies and practices and consistent, fair and equitable allocation of available funds. The 9-1-1 Program Office has created an environment that leverages the competition brought about by the deregulation of the telecommunications industry and offers telecommunications carriers and suppliers of equipment and services equal opportunity to meet the state's requirements.

Internal / External Assessment

State 9-1-1 Program Office

The State 9-1-1 Program Office is under the direction of the State of California Department of General Services, Telecommunications Division, in Sacramento, California. The 9-1-1 Program Office's major role is to administer and disburse the Emergency Telephone Fund appropriately. The 9-1-1 Program Office is currently budgeted for 14 employees including a Program Manager, Systems Compliance Manager, Business Controls Manager, Specialist Project Managers, Telephone System Analysts and staff support.

The 9-1-1 Program Office staff is strained to keep up with administrative duties surrounding billing and reimbursement and the evaluation and approval of funding requests. There is insufficient staff and expertise to proactively address the issues that face the 9-1-1 emergency response services, while meeting the daily needs of the current environment.

It will be critical to identify the staffing needs of the 9-1-1 Program Office, define the roles and responsibilities of all stakeholders, and document budget, policy and process revisions necessary to successfully implement this strategic plan.

Technology

Technology has advanced the ability of public safety agencies to deliver the services the public expects. While there has been substantial progress, the alternatives presented by current and emerging technologies must be evaluated, and decisions with potentially far reaching consequences must be made in order to take advantage of new technology. The state must avoid the higher costs and reduced functionality that may be the ultimate consequences of technical obsolescence.

The 9-1-1 environment consists of three major components, which constitute the basic building blocks of the 9-1-1 architecture:

- The network which receives and transmits the voice call and associated data between the caller's handset and the call taker.
- The Customer Premise Equipment (CPE) located at the PSAP, which receives the call and associated data, directs the call to a call taker and enables the call taker to dispatch the appropriate emergency response personnel.
- The software, databases and other intelligence that enables the voice call to be routed to the appropriate PSAP (usually the closest to the caller) and which concurrently generates and transmits information about the caller's location to the call taker.

Network

California is served by 23 Local Exchanges Carriers (LECs). Pacific Bell and GTE have by far the largest customer base and provide more than 99 % of local telephone service. In addition, there are approximately 97 Alternate Local Exchange Companies (ALECs) and 41 Wireless Network Carriers operating within the state. The interconnections among LECs, ALECs, wireless carriers and long distance carriers collectively make up the Public Switched Telephone Network (PSTN) that provides local and long-distance telephone services to the public.

Today, anyone in California can dial 9-1-1 and be connected to one of the Public Safety Answering Points in the state. However, there is a significant difference in the processing of a 9-1-1 call depending on whether the call is placed using a wireline or wireless telephone.

Wireline

Every wireline 9-1-1 call made in California is routed from the PSTN, through a dedicated enhanced 9-1-1 (E9-1-1) network, to one of the local PSAPs serving the state. Along with the voice call, call takers also receive the caller's ten-digit telephone number (ANI) and the address and other pertinent information about the location where the call was placed (ALI).

Upgrades, which are currently underway, will replace older in-band network signaling trunks between the Local Exchange Carriers and the E9-1-1 system with newer, high function Signaling System 7 (SS7) digital, out-of-band signaling trunks. This replacement will result in significant improvements in the time required to deliver a 9-1-1 call to the PSAP. In addition, the state is beginning to upgrade links within the E9-1-1 system to enhanced Multi-Frequency (MF) trunking.

These upgrades support new requirements to increase the capacity of the E9-1-1 network by allowing transmittal of a 10 digit telephone number and other data. Present links transmit only a 7-digit telephone number.

The 9-1-1 Program also funds statewide digital network connections between PSAPs and Pacific Bell or GTE. The connections employ frame relay and X.25 technologies respectively. These statewide digital networks replaced older analog networks that were very costly and perceived to be less efficient. They currently provide:

- Automatic Location Identification (ALI), which provides information about the caller's location to the PSAP
- Call Detail Records, which contain data about the call's performance characteristics

Collectively, these upgrades pave the way to extend the functionality of the wireline E9-1-1 network to other technologies such as wireless that have more limited service today. In addition, the newer networks offer additional bandwidth that may be used for transport of data supporting additional services and applications in the future.

The existing E9-1-1 network is reliable, but it is more costly and provides less functionality than newer technologies. The state needs to investigate alternative technologies such as Advanced Intelligent Network (AIN).

Wireless

The 9-1-1 system currently in use was originally conceived, designed and implemented in the nineteen sixties, an era when wireline telephones constituted the only widespread commercial telephone service. In the intervening years, wireline 9-1-1 services have profited from many advances in telecommunications technology. In the nineties, wireless telephones have become widely used. With the proliferation of wireless telephones has come the recognition that wireless 9-1-1 callers must be provided the same enhanced level of service enjoyed by their wireline counterparts.

Basic and Enhanced 9-1-1

Nine-one-one calls are usually routed by local exchange carriers (LECs) to Public Safety Answering Points (PSAPs) staffed by call takers trained to assist callers seeking emergency assistance. Call takers direct calls to law enforcement, fire and medical emergency responders.

In the basic form of 9-1-1, the PSAP call taker obtains necessary information about the nature and location of the emergency by questioning the caller. Over the past decade, there have been a number of technological improvements that promote more efficient and rapid emergency response. These improvements are collectively referred to as "enhanced 9-1-1 or E9-1-1." When a 9-1-1 call is placed using a wireline telephone, the call, along with the caller's telephone number and location, is automatically routed to the most appropriate PSAP.

E9-1-1 affords three significant advantages to emergency services personnel:

- Automatic Number Identification (ANI) provides the call taker with the ten-digit telephone number to call back in the event the call is disconnected.
- Automatic Location Identification (ALI) permits immediate dispatch to emergency locations, even in instances where callers are incapacitated or do not know their location. ALI helps personnel dispatched to the emergency site to quickly find its location.
- Where the area served by a LEC central office encompasses areas served by more than one PSAP, ALI permits Selective Routing (SR) of a 9-1-1 call to the PSAP having jurisdiction at the location of the emergency.

FCC Order #94-102

In July 1996, the Federal Communications Commission (FCC) issued an Order and Notice of Further Proposed Rulemaking (NPRM) on docket #94-102 (hereafter referred to as the "FCC Order"). The FCC Order instructs wireless carriers to make significant improvements to their 9-1-1 products and services by implementing "enhanced 9-1-1" or "E9-1-1."

The FCC recognized that wireless technology creates complexities for 9-1-1 service that are absent from wireline 9-1-1. To accommodate the technological and policy issues involved, the FCC Order provided for a two-phase implementation over the five-year period from October, 1996, to October, 2001. The principle difference between the two phases lies in the precision of caller location information provided to PSAPs by wireless carriers.

FCC Order Phase I requires that, not later than April, 1998, wireless carriers complete actions necessary to enable them to supply the location of the cell site or base station receiving the wireless 9-1-1 call. In urban areas, identification of the receiving cell site generally places the caller within a 1 to 3 square mile area. In rural locations, cells are usually less densely placed and the area covered by a cell may be considerably larger.

FCC Order Phase II requires that, not later than October, 2001, wireless carriers must achieve the capability to identify the latitude and longitude of wireless 9-1-1 callers within parameters specifying a minimum acceptable level of accuracy.

E9-1-1 in California

Currently, all wireline 9-1-1 calls placed in California are answered at one of the approximately 500 PSAPs operated by public safety agencies. E9-1-1 functionality is available throughout the state for 9-1-1 calls placed on wireline telephones.

By law, all wireless 9-1-1 calls placed in California are answered at one of the 24 PSAPs operated by the California Highway Patrol (CHP). The CHP, which has jurisdiction on freeways, state highways, county roads and in unincorporated areas, forwards calls not within its jurisdiction to the appropriate local PSAP. Within the state, only basic 9-1-1 functionality is available for 9-1-1 calls placed on wireless telephones.

The 9-1-1 Program Office is committed to providing all 9-1-1 callers the same enhanced level of support regardless of the calling medium. The 9-1-1 Program Office is in the process of evaluating how best to extend E9-1-1 services to wireless callers. As part of that investigation, the 9-1-1 Program Office sponsored and participated in a trial, which is described in the Los Angeles Wireless E9-1-1 Trial Report, of wireless E9-1-1 conducted in Los Angeles County.

Customer Premise Equipment

Equipment located in the PSAP enables the call taker to:

- Receive a 9-1-1 call and, for wireline calls, the caller's telephone number and location information
- Reroute the call to another PSAP
- Dispatch emergency services personnel to the emergency location

The 9-1-1 Program provides funds to procure equipment, such as controllers and intelligent workstations (IWS), that receive 9-1-1 calls at the PSAP and reroute them, if necessary, to another PSAP. Specialized equipment such as Computer Aided Dispatch Systems (CADS) are not currently funded by the state 9-1-1 Program.

Currently, California PSAPs are in the process of replacing older telephone answering equipment with intelligent work stations, which integrate telephone and computer technologies to improve call taking functionality and permit receipt of the 10-digit caller's telephone number and other data required for wireless E-9-1-1. The workstations are relatively costly and the current procurement practice of 5-year leases or direct purchase may result in long term commitment to obsolete technology.

Software, Databases and System Intelligence

Additional intelligence is added by 9-1-1 number and location services funded by the State 9-1-1 Emergency Fund. The database services are provided by Pacific Bell and GTE. These services account for nearly 50% of monies spent annually. Development and maintenance of the Automatic Location Identification (ALI) database is currently provided by the major local exchange carriers (LECs), GTE and Pacific Bell. The two respective companies have steering engineered between the two ALI databases to assure location information of the wireline caller. There are some stand-alone databases maintained by individual cities, i.e. the Avalon Police Department on Catalina Island and the City of Alturas. Stand-alone databases exist mostly due

to their unique location such as Catalina Island or due to the high expense to link with LEC networks.

The Telecommunication Act of 1996, which opened up competition for local dial tone providers, also opened up the issue of multiple databases and ALI data maintenance. The large incumbent carriers have to allow the new "alternate" local exchange carriers (ALEC's) to access their ALI databases to input new customer records and update service changes. All wireline phone companies in this State query the ALI databases maintained by GTE and Pacific Bell.

The pricing of the number and location database services is currently figured per access line. With the tremendous growth in access lines in California, it is imperative that these costs are kept to a minimum and that this element of the 9-1-1-call delivery system continues to be scrutinized for assurance that there are true cost benefits. There is also concern regarding the utilization of expensive trunking that is funded by the State 9-1-1 Program to connect PSAP's and ALECs to the LEC data bases. There needs to be a mechanism in place that monitors trunk utilization, so that the state pays for only those facilities that are needed. In addition, there is a need to upgrade the existing database systems due to tremendous infrastructure changes and to monitor performance in a multiple provider environment.

An important decision is pending regarding the ownership of the 9-1-1 Number and Location Services database(s), as well as the responsibility of maintenance and timely updates. The State 9-1-1 Program issued a Request for Information (RFI) in a search of the benefits, if any, of a single ALI database for California's 9-1-1 system. These database services associate a wireline caller's telephone number with the physical address of the telephone to supply the call taker with critical call location information.

Statewide Management Information Services (MIS)

By law, the State 9-1-1 Program is required to monitor all emergency telephone systems to ensure they comply with minimal operational and technical standards, as established by the Telecommunications Division.[1] The need for timely, reliable and informative management information and statistical data on California's PSAPs and the 24 CHP communication centers is critical in order to comply with this requirement.

The 9-1-1 Program Office acquired a statewide management information system service that collects, compiles and creates reports on call traffic, network and equipment analysis, and operational performance information. Respective PSAP reports are available to the PSAP's via secured Internet access.

The ability to obtain accurate PSAP and statewide management information reports that provide the ability to oversee, assess and analyze the performance of systems, processes, outcome measurements and personnel within the 9-1-1 emergency response systems is still lacking. Because connection to the statewide data networks for call detail reporting is not complete, reports are incomplete. Additional data indicators could increase the ability to monitor and improve processes that will ultimately save more lives.

[1] Section 53115e, California Government Code

To properly manage the high level of emergency services, the 9-1-1 Program Office will need to acquire additional technical and analytical resources since the current workload does not accommodate the technical focus that will be needed.

Public Education

The State program supports agencies in their efforts to educate the public on the proper use of 9-1-1. One of the many benefits of education is that the number of abandoned and non-emergency 9-1-1 calls is reduced. Billboards, rest stop posters, and public service announcements have been deployed to send the message to 9-1-1 callers. The State program provides wireless 9-1-1 materials, such as posters, flyers, stickers, decals and bookmarks to public service agencies at no cost. In 1996, with the support of the California Department of Education, the 9-1-1 Program began providing reimbursement to PSAPs for the cost associated with providing the "9-1-1 for Kids" program to all public and private schools within their jurisdiction. As of today, nearly 10,000 classroom kits have been distributed to California's elementary schools.[2]

Public education on the proper use of the 9-1-1 system is an issue that needs more emphasis in California. There is a need to broaden education efforts to include wireless users, disabled, and non-English speaking segments of the communities. Pre and post program assessment is necessary to evaluate the needs and effectiveness of the education efforts. Population growth, new mandates and technology and service changes require the cooperation of the service providers, the emergency response agencies, and the State of California's 9-1-1 Program to deliver a robust and effective public education program to all segments of the user communities.

Non-Emergency 3-1-1 Trials

The number 3-1-1 has been identified as the three-digit number, which, when deployed, provides a number for citizens to use for all non-emergency calls. The goal is to reduce the amount of non-emergency calls that may clog the 9-1-1 lines to ensure that the 9-1-1 system provides efficient and effective service to the public for all actual emergencies. To date, there is no mandate for cities or counties to utilize 3-1-1 for non-emergency services.

Assembly Bill 1198, passed in November 1997, allowed the State 9-1-1 Program to conduct two trials: a new 3-1-1 non-emergency system in the City of San Jose and a trial in the City of San Diego that advertises the use of an existing local 7-digit non-emergency number. A report on the results of these trials is currently being prepared and will be available the end of December, 1999.

Economics

Current revenue, cost and appropriation information are presented in the following paragraphs.

Revenue

The current .72 of 1% surcharge collected from wireline and wireless telephone subscribers in 1998-1999 has generated $97,461,000.[3]

[2] State of California, Operations Manual, VI Edition
[3] Based on State of California, Dept. of General Services-6/30/99 Fund Condition Statement.

California wireless subscribers are estimated to be approaching $11 Million by the end of 1999 with an annual growth rate of 15%.

California wireline subscribers for just the two major LECs, GTE and Pacific Bell, are estimated to grow to over $25 Million by the end of 1999 with an annual growth rate of 4%.

Due to this growth, the forecasted Emergency Telephone Fund for the next 2 years is expected to be:

1999-2000	$99,414,000
2000-2001	$105,180,000

Costs

The current projected costs for 1998-1999 Emergency Telephone Local Assistance budget is $91,739,000.[4]

The past five year actual costs were:

1997-1998	$71,470,896[5]
1996-1997	$64,740,770
1995-1996	$64,953,311
1994-1995	$63,510,140
1993-1994	$62,145,167

Appropriation – 1998-1999

- Current Local Assistance Appropriation is $91,739,000.[6]
- Current Unexpended Appropriation is $1,664,0000.[7]

Legislation or Regulatory Orders

Legislation is needed to enable wireless 9-1-1 calls to be selectively routed, where appropriate, to local PSAPs as well as to the California Highway Patrol, where all wireless 9-1-1 calls are currently routed. New legislation may also be required to support this strategic plan and careful review and evaluation of current and pending legislation is necessary to anticipate mandates, orders, or actions that may influence or drive direction and decisions.

[4] Expenditures can be paid through 6/30/2001.
[5] Actual expenditures through 9/30/99, can be paid through 6/30/2000.
[6] Includes a $13,201,000 deficiency request for 1998-1999.
[7] As of 9/30/99 and expenditures can be paid through 6/30/2001.

Mission

The mission of the 9-1-1 Program of the Telecommunications Division of the California Department of General Services is to enable Public Safety Answering Points to receive calls and related information necessary to respond to callers seeking 9-1-1 assistance. The 9-1-1 Program champions the interests of California's 9-1-1 community and represents the community to the world at large.

Principles

The following principles guide the activities of the 9-1-1 Program of the Telecommunications Division of the California Department of General Services as it carries out its mission:

- The primary customers of the 9-1-1 Program are the California Public Safety Answering Points.
- Policy formulation, implementation and enforcement will be accomplished without disruption to the delivery of emergency services.
- Existing and emerging technologies will be deployed in the most cost-effective manner.
- Operational, technical and performance standards will be used to promote the highest quality of 9-1-1 service available.
- The Emergency Telephone Fund will be administered prudently and distributed prudently and equitably.
- Competition among carriers, suppliers and vendors will be leveraged.

Where Do We Want To Be

Vision

Anyone, anywhere within the State of California, will have access to the fastest, most reliable, most accurate and most secure 9-1-1 services.

Goals and Objectives

Goal 1. ***The primary focus of the 9-1-1 Program will be its customers: California's Public Safety Answering Points.***

a. **Objective:** Establish a Steering Committee of executives from key state and local emergency services agencies to provide policy, direction, guidance, advice, concurrence and sponsorship for 9-1-1 Program initiatives.

Completion Date: January 31, 2000
Measurement(s): Agenda created and first meeting scheduled

b. **Objective:** Implement a process to systematically obtain policy, direction, guidance, advice, concurrence and sponsorship from the Steering Committee.

Completion Date: January 31, 2000
Measurement(s): Present process to the Steering Committee and obtain concurrence

c. **Objective:** Establish a 9-1-1 Emergency Services Advisory Board from a cross-section of California PSAPs that represent the diverse demographics, topography and jurisdictions within the state to:

i) Explore concepts, methods and technologies

ii) Identify issues and concerns

iii) Evaluate the operational feasibility and practicality of proposed policies, standards and initiatives

iv) Formulate viable alternatives and recommendations to improve PSAP operational effectiveness and efficiency

Completion Date: February 29, 2000
Measurement(s): Agenda created and first meeting scheduled

d. **Objective:** Create a resource list of telecommunications and 9-1-1 experts to advise the Steering Committee, 9-1-1 Emergency Services Board and 9-1-1 Program Office.

Completion Date: February 29, 2000
Measurement(s): Provide list to Steering Committee, Board and 9-1-1 Program Office

e. **Objective:** Define the scope of the 9-1-1 Program Office's authority, its roles and its responsibilities.

Completion Date: May 31, 2000
Measurement(s): Updated 9-1-1 Procedures Manual

f. **Objective:** Determine the organization and staff required to support new roles and responsibilities assumed by the 9-1-1 program Office as result of this strategic plan.

Completion Date: July 31, 2000
Measurement(s): 9-1-1 Program Office is fully staffed

g. **Objective:** Adopt well-defined processes that effectively and efficiently respond to the needs of our customers, the California Public Safety Answering Points (PSAPs).

Completion Date: June 30, 2000
Measurement(s): Updated and republished 9-1-1 Procedures Manual

Goal 2. ***Every 9-1-1 call originating in California will receive the same level of service regardless of the communication device used to place the call or the technology used to deliver it.***

a. **Objective:** Lead development of a plan to deploy wireless enhanced 9-1-1 that contains

i) A comprehensive list of business, technical and operational requirements

ii) An evaluation of benefits and associated costs

iii) Tactical solutions and long term strategies

Completion Date: May 31, 2000
Measurement(s): Approval of the plan by the Steering Committee

b. **Objective:** Propose legislation that enables wireless 9-1-1 calls to be selectively routed, where appropriate, to local PSAPs, as well as to the California Highway Patrol, where all wireless 9-1-1 calls placed within California are currently routed.

Completion Date: June 30, 2000
Measurement(s): Governor signs legislation

c. **Objective:** Identify variables that could impact or influences deliver of enhanced 911 services.

Completion Date: March 31, 2000
Measurement (s): Present outline of findings and preliminary recommendations to the Advisory Board.

d. **Objective:** Report the results of the pilot study comparing two prominent alternatives to address the public's need for speedy access to non-emergency government services. The two alternatives being studied are:

   i) Use of 3-1-1 as the universal non-emergency number

   ii) Expanded public awareness of the 7-digit non-emergency number that each public services agency maintains for public convenience.

   Completion Date: December 31, 1999
   Measurement(s): Formal report delivered to the Legislature

e. **Objective:** Lead a study of PSAP 9-1-1 call response models to determine whether PSAP consolidation and regionalization would result in:

   i) More widespread and less costly access to sophisticated technology and technical support

   ii) More effective and efficient delivery of 9-1-1 services

   Completion Date: March 31, 2001
   Measurement(s): Study and recommendations for next steps delivered to Steering Committee

f. **Objective:** Lead a study of PSAP 9-1-1 call response models to determine whether 9-1-1 call load balancing across multiple PSAPs would result in better, more consistent service to the public.

   Completion Date: March 31, 2001
   Measurement(s): Study and recommendations for next steps delivered to Steering Committee

Goal 3. 9-1-1 services will be managed based on measurable service objectives, standards for quality and evaluation of promised benefits versus projected costs.

a. **Objective:** Develop and maintain cost models to aid the state's decision making process through accurate projection of estimated costs associated with proposed initiatives and solution alternatives.

   Completion Date: December 31, 2000
   Measurement(s): Present to Steering Committee and obtain concurrence

b. **Objective:** Establish a well-defined and documented process that fosters fact-based management decisions and includes:

i) Service level objectives based on published standards for performance, availability, quality and cost

ii) Automated mechanisms to capture and report measurement data

iii) Thresholds and escalation procedures

Completion Date: October 31, 2000
Measurement(s): Present to Steering Committee and obtain concurrence

c. **Objective:** Measure the effectiveness and efficiency of 9-1-1 Program's internal processes.

Completion Date: January 31, 2001
Measurement(s): Present to Steering Committee and obtain concurrence

Goal 4. ***9-1-1 services will be supported by easily enhanced architecture that accommodates traditional and evolving technologies, responds to changing state and federal mandates and leverages the advantages of a competitive marketplace.***

a. **Objective:** Develop a detailed baseline that reflects the current 9-1-1 environment and includes:

i) Network configuration

ii) Selective routing, Address Location Information and other databases that provide the "intelligence" through automation of essential 9-1-1 functions

iii) Customer Premise Equipment

iv) Performance and availability service levels

Completion Date: March 31, 2000
Measurement(s): Summarize to Steering Committee

b. **Objective:** Capture requirements and develop a model of the 9-1-1 architecture required to make real the vision and goals documented in this strategic plan. The architecture will consider intelligent networks, global information systems, broadband, voice over data, voice over IP, voice over cable and other existing and emerging technologies.

Completion Date: December 31, 2000
Measurement(s): Acceptance of model by 9-1-1 stakeholders including Steering Committee and 9-1-1 Emergency Services Board

Goal 5. ***9-1-1 services implementation and enhancement will be based on well defined, published standards that take into account emerging technologies, changes in law, regulation and policy, and improvements in 9-1-1 business practices.***

a. **Objective:** Recommend, in consultation with PSAPs, implementation and performance standards for:

   i) The network

   ii) Customer Premise Equipment deployed at PSAPs

   iii) Software, applications and database that provide 9-1-1 system "intelligence"

   Completion Date: September 30, 2000
   Measurement(s): Acceptance of recommended standards by the Steering Committee and 9-1-1 Emergency Services Advisory Board

b. **Objective:** Document and publish California's 9-1-1 standards, in the Operations Manual.

   Completion Date: December 31, 2000
   Measurement(s): Publish updated standards in the 911 Program Operations Manual

c. **Objective:** Reevaluate and expand the process to assess and enforce conformance to accepted standards.

   Completion Date: January 31, 2001
   Measurement(s): Acceptance by the Steering Committee

d. **Objective:** Implement a process to review, evaluate and enhance standards in order to incorporate changes resulting from changing technologies, policies, statutes, regulations and business practices.

   Completion Date: December 31, 2000
   Measurement(s): Acceptance by the Steering Committee

e. **Objective:** Encourage adoption of California's recommended standards through participation in deliberation and decision making process of national and international standards boards, supplier focus groups and other venues.

   Completion Date: Ongoing
   Measurement(s): Semi-annual activity reports to the Steering Committee.

Goal 6. ***9-1-1 funding strategies will ensure cost-effective and equitable distribution of funds, while accommodating emerging technologies, changing mandates, telecommunications deregulation, and evolving expectations of the public, 9-1-1 community, the administration and the legislature.***

a. **Objective:** Ensure funding legislation meets the projected needs of public safety services resulting from:

   i) Population growth

   ii) New functional and performance requirements

   iii) Evolving technologies

   iv) Changing 9-1-1 Program Office authority, roles and responsibilities

   Completion Date: Ongoing
   Measurement(s): Funds available for each project approved by the Steering Committee.

b. **Objective:** Conduct cost benefit analysis of fiscal year 2000-2001 initiatives considering revenue generation and impact to the Telephone Emergency Fund:

   Completion Date: April 30, 2000
   Measurement(s): Delivery of Spring Letter to Department of Finance

c. **Objective:** Conduct cost benefit analysis of proposed initiatives for fiscal year 2001-2002 considering revenue generation and impact to the Telephone Emergency Fund:

   Completion Date: June 30, 2000
   Measurement(s): Delivery of Budget Change Proposal to Agency

Goal 7. ***Legislation and regulation will encourage and advance the efforts of the 9-1-1 community to make real the vision described in this strategic plan.***

a. **Objective:** Propose legislation that enables wireless 9-1-1 calls to be selectively routed where appropriate to local PSAPs, as well as to the California Highway Patrol where all wireless 9-1-1 calls are currently routed.

   Completion Date: June 30, 2000
   Measurement(s): Governor signs legislation

b. **Objective**: Review existing statutes and propose new legislation as necessary in support of this strategic plan.

Completion Date: June 30, 2000
Measurement(s): Governor signs legislation

c. **Objective**: Review existing statutes and propose new legislation as necessary in support of new roles and responsibilities of the 9-1-1 Program Office.

Completion Date: June 30, 2000
Measurement(s): Governor signs legislation

d. **Objective**: Review existing procurement policies and procedures and modify and enhance as necessary to leverage changes the telecommunications marketplace.

Completion Date: February 28, 2001
Measurement(s): Governor signs legislation

Goal 8. The public and 9-1-1 professionals will recognize California as the premiere provider of 9-1-1 services.

a. **Objective:** Create a plan to facilitate public awareness and education about the appropriate uses of 9-1-1 for emergencies.

Completion Date: June 30, 2000, ongoing
Measurement(s): Plan accepted by the Steering Committee

b. **Objective:** Continue leadership role in national and California emergency services organizations such and the National Emergency Number Association.

Completion Date: June 30, 2000, ongoing
Measurement(s): Presentation of this strategic plan to the California Chapter of the National Emergency Number Association.

How Do We Get There

Action Plan

The Action Plan is presented in Chart 1 below. The chart lists the most important objectives identified in Where Do We Want To Be Section of this Strategic Plan beginning on p. 11. The associated goal number and objective identifier are listed to the left of each objective.

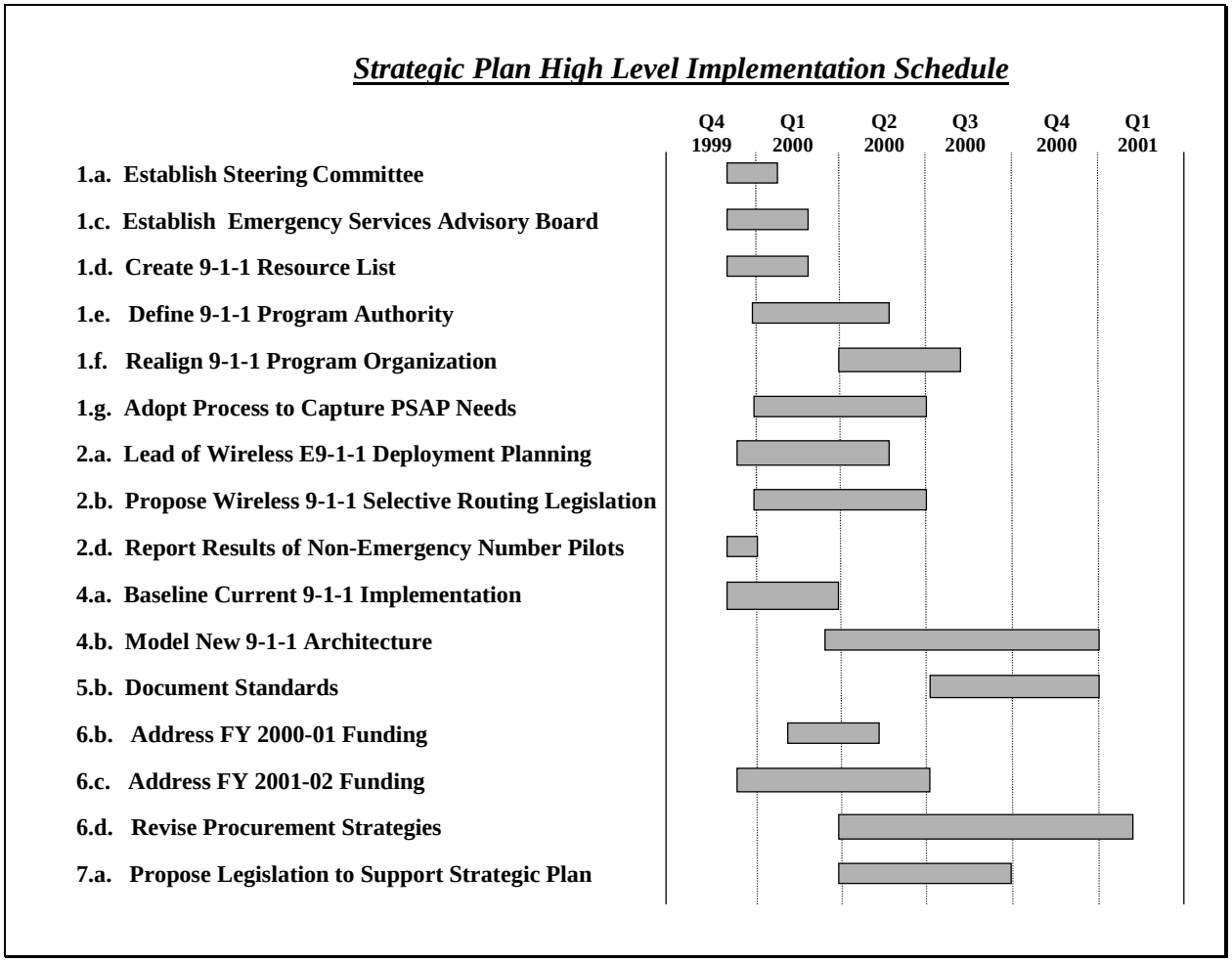

Chart 1

How Do We Measure Our Progress

Performance Measures

Key measurements used to measure overall progress are listed below each objective in the Where Do We Want To Be Section of this document starting on p.11.

Monitoring and Tracking

Progress will be monitored and tracked using rigorous project management disciplines and project management tools that track tasks and associated levels of effort. The 9-1-1 Project Management Office will employ best practices to manage the scope, resources and schedules of projects initiated in support of this strategic plan.

Resource allocation

Resources required to implement this plan include at a minimum the following:

- 9-1-1 Program Office staff
- Subject matter experts
- Funding

Program Office

Program Office staff will need to be augmented to support the additional responsibilities of the office and the new projects to be undertaken to implement the objectives documented in this strategic plan. Additionally, the staff will require training and development in several disciplines, such as project management, network design, performance and compliance monitoring and reporting, cost benefit analysis and return on investment methodologies.

Subject matter experts

Subject matter experts will provide many of the new technical and management skills required to implement the above objectives, especially those supporting the new architectures, emerging technologies and program oversight. Initially, consultants will be engaged to lead some of the projects, to mentor the Program Office staff and to ensure skill transfer is an ongoing effort in the evolution of the office.

Funding

Until some of the work identified in this plan is complete, one cannot identify the total dollars needed by the 9-1-1 Program Office to implement this plan. The projects will need more finite scope definition and detailed cost analysis before the 9-1-1 Program Office can project and document the funding needed. However, because most of the objectives reflect new responsibilities for the Program Office and the Program, budget augmentation requests are

anticipated. For now, funds will be redirected within the program so that the priority start up activities can be completed.